

A close-up photograph of a person's hands using a hand plane on a piece of wood. Wood shavings are scattered on the workbench. A green horizontal line runs across the middle of the image, separating the title from the host/presenter information.

Global Day of Coderetreat 2018

Westlake Village, CA

Hosted By
CJ Affiliate

Presented By
Jamie Isaacs
Chandler Giusti



Agenda

Introductions, Explanation

10:00am

Session 1 – Paper Exercise

TDD & Four Rules of Simple Design

Session 2 – Test Driven Design

Lunch

12:30pm

Session 3 – Baby Steps

1:30pm

Session 4 – TDD as if you meant it

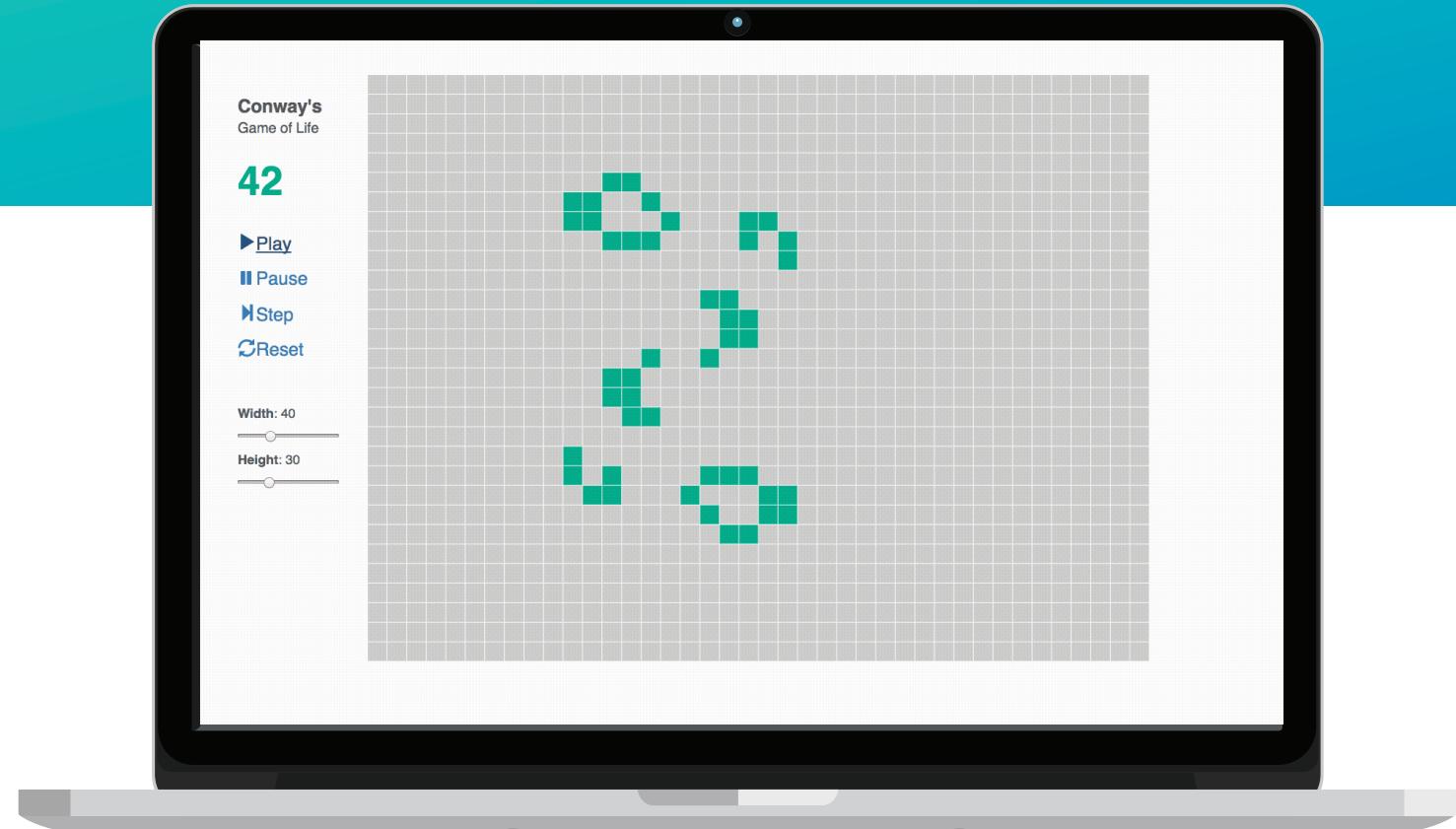
Session 5 – Choose your own adventure

Closing Circle

Thanks for coming!

5:00pm

Conway's Game of Life



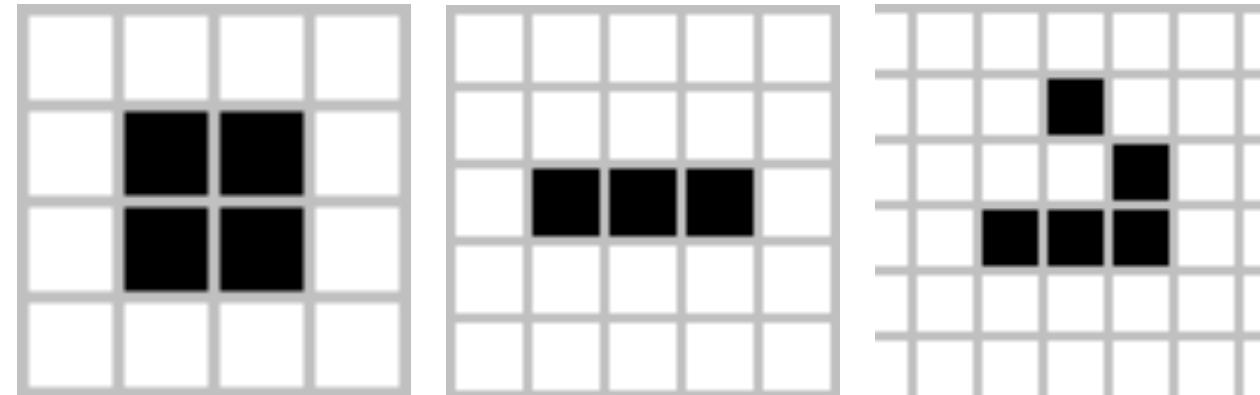
Game of Life Rules

- Any **live cell** with fewer than 2 live neighbors **dies**, by under-population
- Any **live cell** with 2 or 3 live neighbors **lives** on to the next generation
- Any **live cell** with more than 3 live neighbors **dies**, by over-population
- Any **dead cell** with exactly 3 live neighbors **becomes a live cell**, by reproduction

20 min

Paper Exercise

- Apply the rules with pen and paper
- Beware of repeating patterns
 - Still life
 - Oscillators
 - Spaceships



A photograph showing a person's hands and arms as they write on a large sheet of paper with a black marker. The person is wearing a plaid shirt and dark pants. The paper has several small, colorful rectangular cards or stickers scattered across it. The background is dark.

Retrospective

- What did you learn?
- Did anything surprise you?

Code is not how you tell the computer what to do.

It is how you tell another programmer what you want the computer to do.

Four Rules of Simple Design

In priority order:

1. Passes all tests
2. Expresses intent
3. No duplication
4. Small (no unneeded code)

Test Driven Design

- Write a failing test
- Write just enough code to make it pass
- Refactor to make it better

Pair Programming

- Driver-Navigator
- Backseat Navigator
- Tour Guide
- Ping-Pong

TDD Exercise

45 min

Pair with someone who's done it before

Four Rules:

- Passes all tests
- Expresses intent
- No duplication
- Small

TDD:

- Write a failing test
- Write just enough code to make it pass
- Refactor to make it better

A photograph showing a person's hands and arms as they write on a large sheet of paper with a black marker. The person is wearing a plaid shirt and dark pants. The paper appears to have some printed text and diagrams, though it's mostly obscured by the person's hands and the dark overlay of the slide.

Retrospective

- What did you learn?
- Did anything surprise you?

A photograph showing a group of people from the side, all looking down at their mobile devices. They are seated in a row, wearing winter clothing like coats and scarves. The scene is set indoors with warm lighting.

Lunch

Next session – 1:30pm

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5:00pm

45 min

Baby Steps Exercise

- Create a git repository

\$ git init

- Start a timer for 2 minutes
- Every time you commit, reset the timer

\$ git add . && git commit -m "rule 1 done"

- If the timer goes off and tests are not green, revert and start over

\$ git reset --hard

A photograph showing a person's hands and arms as they write on a large sheet of paper with a black marker. The person is wearing a plaid shirt and dark pants. The paper has several small, colorful squares or cards scattered across it, suggesting a planning or retrospective activity.

Retrospective

- What did you learn?
- Did anything surprise you?
- **What was different this time?**

45 min

TDD as if you meant it Exercise

- Write one failing test
- Make it pass by writing implementation code **in the test function**
- Write another failing test and implement
- Extract duplication to fields, a new class, or module
- Refactor using the *Four Rules of Simple Design* as needed

A photograph showing a person's hands and arms as they write on a large sheet of paper with a black marker. The person is wearing a plaid shirt and dark pants. The paper appears to have some printed text and diagrams, possibly a user interface wireframe, with red and blue highlights. Other people's hands are visible in the background, suggesting a group activity.

Retrospective

- What did you learn?
- Did anything surprise you?

45 min

Choose your own adventure Exercise

- Mute Pair – *No talking, writing, or code comments. Communicate through code.*
- No primitive types – *No use of scalar types: int, string, bool, etc.*
- Void methods only – *Methods cannot return a value.*
- *More Ideas: bit.ly/cj-retreat*

A photograph showing a close-up of a person's hands writing on a large sheet of paper with a black marker. The person is wearing a plaid shirt. On the table in front of them are several colorful cards, some red and some blue, which appear to be part of a game or activity. The background is dark.

Retrospective

- What did you learn?
- Did anything surprise you?
- **Did you also reuse a previous constraint?**
 - **Was it conscious?**

Closing Circle



Thanks!

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